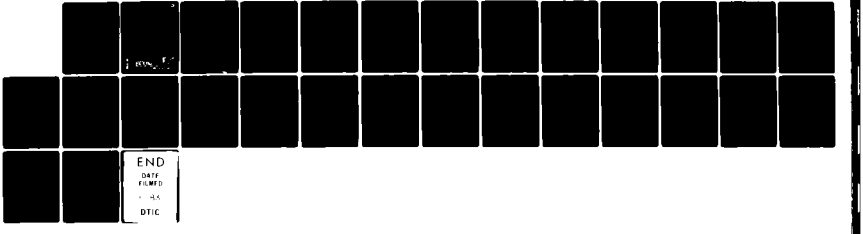
AD-A122 611 19318B MLRS MISSILE NUMBERS BN-159 BN-126 BN-147 ROUND 1/1
NUMBER V-327/PQ67..(U) ARMY ELECTRONICS RESEARCH AND
DEVELOPMENT COMMAND WSMR NM ATM.. D C KELLER SEP 82
UNCLASSIFIED ERADCOM/ASL-DR-1261 F/G 4/2 NL



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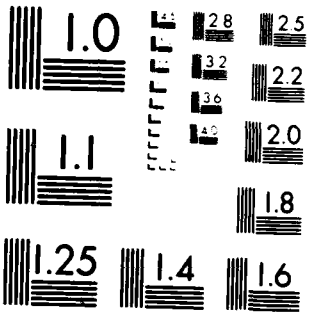

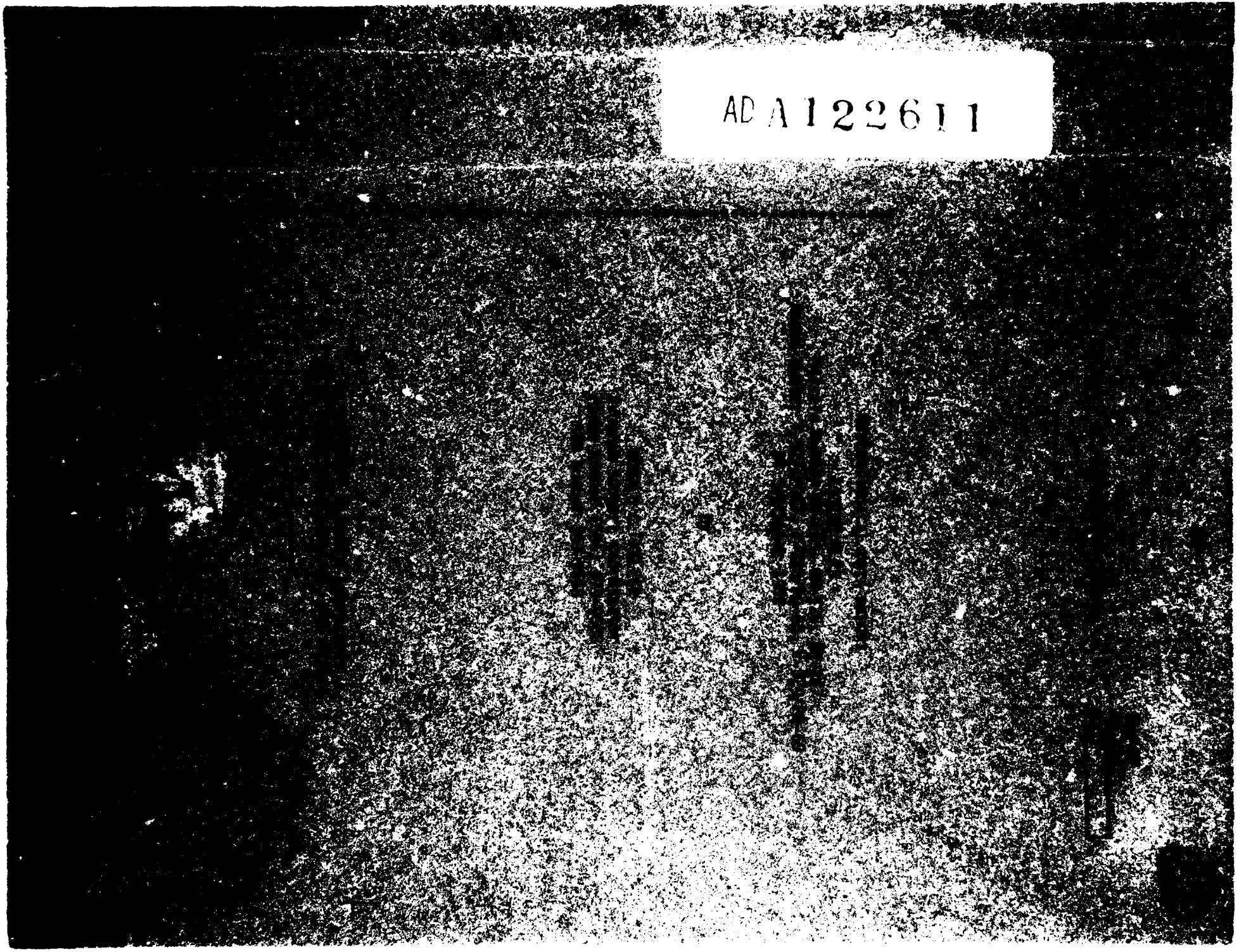

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REPORT DOCUMENTATION PAGE	READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER: DR 1261	2. GOVT ACCESSION NO.: AD-A122677
3. RECIPIENT'S CATALOG NUMBER	
4. TITLE (and Subtitle): 19318B MLRS Missile Number BN-159, BN-126, BN-147 Round Number V-327/PQ-67, V-328/PQ-68, V-329/PQ-69	5. TYPE OF REPORT & PERIOD COVERED
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7. AUTHOR(s): White Sands Meteorological Team	8. CONTRACT OR GRANT NUMBER(s): DA Task 1F665702D127-02
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19. KEY WORDS (Continue on reverse side if necessary and identify by block number)	
20. ABSTRACT (Continue on reverse side if necessary and identify by block number): Meteorological data gathered for the launching of the 19318B MLRS, Missile Number BN-159, BN-126, BN-147, Round Number V-327/PQ67, V-328/PQ-68, V-329/PQ-69 are presented in tabular form.	

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CONTENTS PAGE

INTRODUCTION

19318B MLRS, Missile Numbers BN-159, BN-126 and BN-147, Round Numbers V-327/PQ-67, V-328/PQ-68 and V-329/PQ-69, were launched from LC-33, White Sands Missile Range (WSMR), New Mexico, at 1513:51, 1513:56 and 1514:01 MDT, 24 Sep 82. The schedule launch times were 1505, 1505:04.5 and 1505:09 MDT.

DISCUSSION

Meteorological data were recorded and reduced by the White Sands Meteorological Team, Atmospheric Sciences Laboratory (ASL), White Sands Missile Range, New Mexico. The data were obtained by the following methods:

1. Observations

a. Surface

(1) Standard surface observations to include pressure, Temperature (^{o}C), relative humidity, dew point (^{o}C), density (gm/m^3), wind direction and speed, and cloud cover were made at the LC-33 Met Site at T-0 minutes.

(2) Anemometer data were provided from existing pole-mounted and tower-mounted anemometers at LC-33. Monitor of wind speed and direction from one anemometer was also provided in the launch control room.

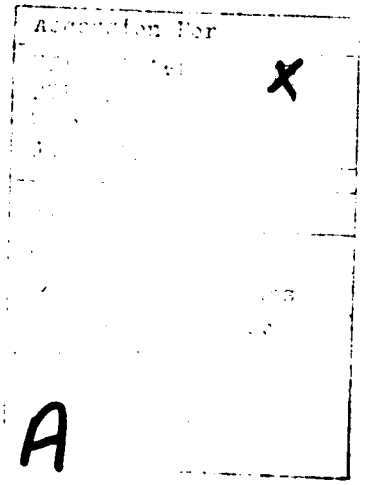
b. Upper Air

(1) Low level wind data were obtained from Pilot-balloon observations at:

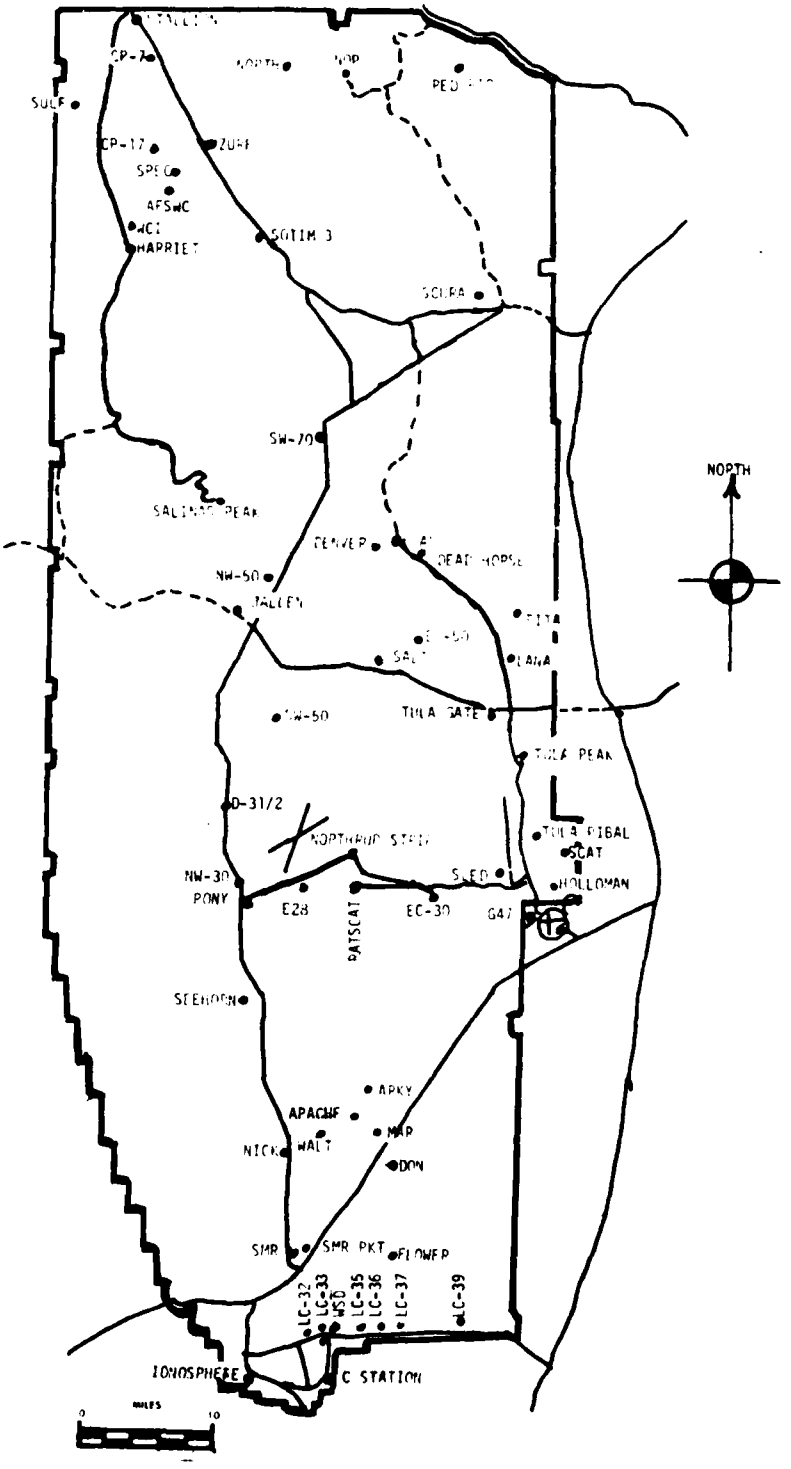
SITE AND ALTITUDE
WSD 2KM
DON 2KM

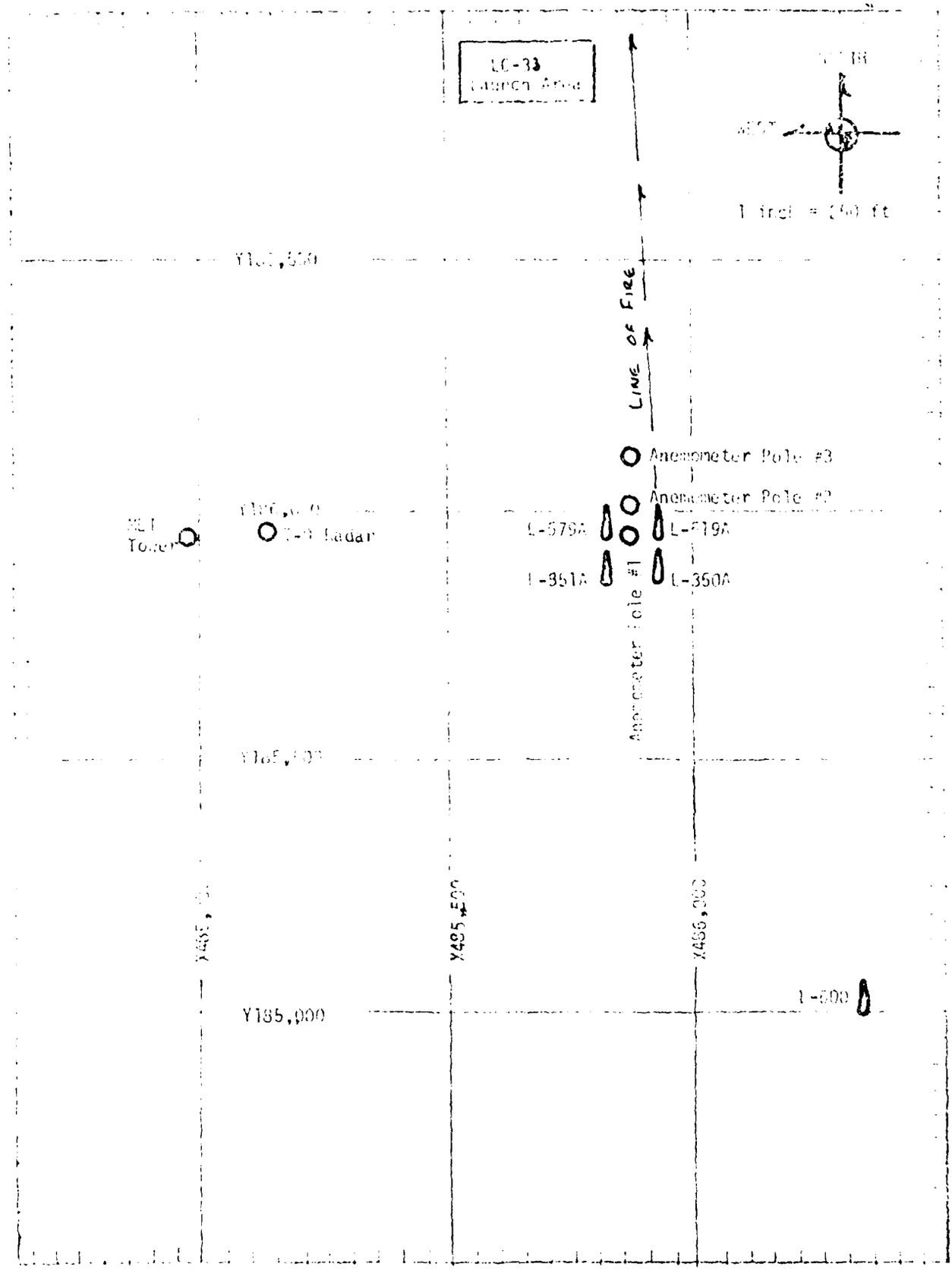
(2) Air structure data (rawinsonde) were collected at the following Met Sites.

SITE AND TIME
LC-37 1200 MDT
WSD 1300 MDT
LC-37 1400 MDT
WSD 1505 MDT



WSMR METEOROLOGICAL SITES




LC-33
Launch Area
1 Inch = 250 ft
LINE OF FIRE
Anemometer Pole #3
Anemometer Pole #2
Anemometer Pole #1
L-379A
L-379A
L-351A
L-350A
L-300
Y185,000
X485,000
X486,000

PROJECT SURFACE OBSERVATION

TABLE 1 STATION LC-33 E & A

DATE 24 (DAY) Sep (MONTH) 82 (YEAR) X= 484,982.64 Y= 185,957.73 H= 3995.00

TIME M D T	PRESSURE mbs	TEMPERATURE °F	TEMPERATURE °C	DEW POINT °F	DEW POINT °C	RELATIVE HUMIDITY %	DENSITY gm/m³	WIND DIRECTION degs Tn	WIND SPEED kts	WIND CHARACTER kts	VISIBILITY
1514	881.6		30.2		9.9	28	1011	020	10		50 ml

OBSTRUCTIONS TO VISIBILITY	CLOUDS 1st LAYER AMT	1st LAYER TYPE	1st LAYER HGT	2nd LAYER AMT	2nd LAYER TYPE	2nd LAYER HGT	3rd LAYER AMT	3rd LAYER TYPE	3rd LAYER HGT	REMARKS
	1	CU	6,500	8	CI	25,000				H ALODS

PSYCHROMETRIC COMPUTATION

TIME:	1514		
DRY BULB TEMP.	30.2		
WET BULB TEMP.	17.2		
WET BULB DEPR.	13.0		
DEW POINT	9.9		
RELATIVE HUMID.	28		

TABLE 2 LC-33 FIELD POLE ANEMOMETER MEASURED WINDS

*

POLE #1 X485,874.24 Y185,958.90 H4016.74 38.7 ft. AGL			POLE #2 X485,874.24 Y1[illegible] H4033.52 [illegible] ft. AGL			POLE #3 X485,[illegible] Y185,[illegible] H4063.90 [illegible] ft. AGL		
T-TIME SEC	DIR DEG	SPEED KNOTS	T-TIME SEC	DIR DEG	SPEED KNOTS	T-TIME SEC	DIR DEG	SPEED KNOTS
T-[illegible]	020	10	T-[illegible]	007	10	T-[illegible]	028	12
T-[illegible]	020	12	T-[illegible]	011	11	T-[illegible]	027	14
T-[illegible]	020	10	T-[illegible]	017	10	T-[illegible]	034	13
T-[illegible]	020	10	T-[illegible]	014	09	T-[illegible]	027	16
T+10	020	13	T+10	007	12	T+10	028	15

TABLE 3 LC-33 METEOROLOGICAL TOWER ANEMOMETER MEASURED WINDS [illegible]

LEVEL #1, [illegible] FEET X484,982.64, Y185,[illegible].73, H3933.00 (base)			LEVEL #2, [illegible] FEET X484,982.64, Y185,057.73, H3963.00 (base)		
T-TIME SEC	DIR DEG	SPEED KNOTS	T-TIME SEC	DIR DEG	SPEED KNOTS
T-[illegible]	035	10	T-30	026	12
T-[illegible]	023	10	T-[illegible]	026	10
T-10	035	10	T-10	027	10
T0.0	017	10	T0.0	021	14
T+10	036	10	T+10	034	14

LEVEL #3, [illegible] FEET X484,982.64, Y185,[illegible].73, H3933.00 (base)			LEVEL [illegible], [illegible] FEET X484,[illegible], Y185,[illegible], H[illegible] (base)		
T-TIME SEC	DIR DEG	SPEED KNOTS	T-TIME SEC	DIR DEG	SPEED KNOTS
T-30	021	13	T-30	022	14
T-20	023	14	T-20	021	15
T-10	035	13	T-10	026	15
T0.0	021	14	T0.0	023	14
T+10	024	14	T+10	025	14

* Pole #1 Dirs are estimated!

TABLE 4

T-TIME PILOT-BALLOON MEASURED WIND DATA

DATE 24 Sep 1982

SITE: WSD
TIME: 1508 MDT
WSTM COORDINATES:
X = 488,852.29
Y = 184,982.45
Z = 3,993.75

LAYER MIDPOINT METERS AGL	DIRECTION DEGREES	SPEED KNOTS
SURFACE	030	14
150	015	14
210	023	14
270	028	12
330	022	13
390	031	11
500	026	10
650	019	07
800	356	04
950	312	06
1150	298	08
1350	300	08
1550	302	08
1750	289	07
2000	Balloon Burst	

SITE: DON
TIME 1514 MDT
WSTM COORDINATES:
X = 511,988.37
Y = 247,396.36
Z = 3,996.83

LAYER MIDPOINT METERS AGL	DIRECTION DEGREES	SPEED KNOTS
SURFACE	350	05
150	345	12
210	345	14
270	344	14
330	343	14
390	343	14
500	344	14
650	341	12
800	342	12
950	348	13
1150	347	14
1350	345	13
1550	327	11
1750	304	10
2000	287	12

All data obtained from single Theodolite Tracked Pilot-Balloon Observations

TABLE 5

TIMING AND T-TIME COMPUTER MET MESSAGES
24 SEPTEMBER 1982

LC-37 1200 MDT
METCM1324063
241800124881

00587004	30060881
01002010	30300871
02637016	29820847
03011007	29590809
04538008	29300763
05562005	28920720
06544002	28480678
07243003	28030639
08627003	27680601
09638009	27470565
10590008	27250531
11565006	26910498
12589013	16360453

WSD 1300 MDT
METCM1324064
241900122884

00027014	30450884
01042012	30230874
02038010	29890849
03041004	29650811
04529008	29320766
05516008	28920722
06443002	28460680
07309003	27980641
08631005	27720603
09631009	27460566
10595009	27200532
11560007	26870500
12611015	26320454

LC-37 1400 MDT
METCM1324063
2400124880

00560005	30450880
01587010	30230870
02046009	30010846
03022005	29750808
04546008	29380763
05532008	28930720
06500003	28480678
07388003	27970638
08605004	27660601
09609011	27460565
10592010	27180530
11548009	26870498
12575014	26300452

WSD 1505 MDT
METCM1324064
242110122882

00053010	30700882
01039013	30380872
02025015	30020848
03037007	29700810
04557007	29380765
05537008	28930765
06538005	28470680
07501005	28020640
08574009	27680602
09615011	27410566
10579011	27120532
11512010	26860499
12594017	26360453

STATION ALTITUDE 4051.37 FEET MSL
24 SEP. 82 1200 HRS MDT
ASCENSION NO. 97

SIGNIFICANT LEVEL DATA
82261200097
LC-37

GEODETIC COORDINATES
32.40175 LAT DEG
106.51232 LON DEG

TABLE 6

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	DEWPOINT DEGREES CENTIGRADE	REL.HUM. PERCENT
881.3	4051.4	25.7	11.5	41.0
862.3	4680.3	24.7	9.4	38.0
850.0	5093.5	24.2	8.5	37.0
823.9	5985.6	21.7	5.6	35.0
811.3	6424.3	21.9	5.8	35.0
737.9	9104.5	16.8	2.8	39.0
700.0	10571.2	13.1	-5.2	32.0
652.0	12515.9	8.0	-4.0	40.0
612.9	14180.3	3.4	-5.0	34.0
607.4	14420.7	3.1	-10.8	35.0
588.8	15249.0	3.1	-18.2	19.0
570.8	16072.7	1.5	-19.7	19.0
561.9	16488.6	1.3	-20.4	18.0
527.4	18157.6	-1.0	-23.0	16.0
500.0	19549.5	-3.9	-26.0	16.0
455.0	21969.2	-10.0	-31.6	15.0
425.8	23645.8	-11.8	-32.5	16.0
400.0	25208.6	-15.8	-34.6	18.0

STATION ALTITUDE 4051.37 FEET MSL
24 SEP. 82 1200 HRS MDT
ASCENSION NO. 97

UPPER AIR DATA
[illegible]
LC-37

GEODETIC COORDINATES
32.40175 LAT DEG
106.31232 LON DEG

TABLE 7

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	DEWPOINT	RELATIVE HUMIDITY PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TRUE)	SPEED KNOTS	INDEX OF REFRACTION
4051.4	881.3	25.7	11.5	41.0	1021.3	675.4	330.0	4.1	1.000285
4500.0	867.7	25.0	10.0	38.9	1006.5	674.5			1.000277
5000.0	852.8	24.3	7.2	33.4	994.2	673.4			1.000265
5500.0	838.0	23.1	6.1	33.4	981.4	671.9			1.000259
6000.0	823.5	21.7	5.6	35.0	968.4	670.4			1.000256
6500.0	809.1	21.8	5.7	35.1	951.7	670.5			1.000252
7000.0	795.0	20.8	5.1	35.9	938.1	669.5			1.000248
7500.0	781.3	19.9	4.6	36.6	924.8	668.2			1.000244
8000.0	767.3	18.9	4.0	37.4	911.6	667.1	312.3	7.1	1.000239
8500.0	753.9	18.0	2.5	38.1	898.6	666.0	308.2	7.6	1.000235
9000.0	740.6	17.0	2.9	38.8	885.8	664.9	306.9	6.9	1.000231
9500.0	727.5	15.8	1.2	37.1	874.0	663.4	311.5	5.7	1.000225
10000.0	714.5	14.5	-.8	34.7	862.0	661.8	313.0	4.6	1.000219
10500.0	701.8	13.3	-2.9	32.3	851.3	660.2	315.3	3.5	1.000212
11000.0	689.1	12.0	-3.5	33.8	839.0	658.7	313.5	2.2	1.000209
11500.0	676.6	10.7	-3.8	35.8	828.4	657.2	308.1	.9	1.000206
12000.0	664.4	9.4	-4.3	37.9	817.2	655.6	116.6	1.0	1.000203
12500.0	652.4	8.0	-4.7	39.9	806.2	654.1	121.3	2.5	1.000200
13000.0	640.4	6.7	-4.7	44.1	795.2	652.5	128.7	2.8	1.000198
13500.0	628.6	5.3	-4.7	48.3	784.4	650.9	125.0	2.1	1.000196
14000.0	617.0	3.9	-4.9	52.5	773.3	649.3	49.5	.8	1.000193
14500.0	605.6	3.1	-11.4	33.5	762.5	648.0	357.3	3.1	1.000183
15000.0	594.3	3.1	-15.6	23.8	748.6	647.9	353.4	6.2	1.000176
15500.0	583.3	2.6	-18.7	19.0	736.3	647.2	352.6	7.9	1.000171
16000.0	572.4	1.5	-19.6	19.0	725.5	645.9	352.1	9.2	1.000168
16500.0	561.7	1.3	-20.4	18.8	712.4	645.6	349.4	9.4	1.000165
17000.0	551.1	.6	-21.3	17.4	700.8	644.6	348.1	9.4	1.000162
17500.0	540.7	-.1	-22.3	16.8	689.4	644.0	339.4	8.9	1.000159
18000.0	530.6	-.8	-23.3	16.3	678.2	643.2	331.4	8.4	1.000156
18500.0	520.5	-1.7	-24.2	16.0	667.6	642.0	325.3	7.3	1.000153
19000.0	510.6	-2.8	-25.0	16.0	657.5	640.6	319.1	6.5	1.000151
19500.0	500.9	-3.8	-25.9	16.0	647.5	639.6	317.8	6.5	1.000148
20000.0	491.3	-5.0	-27.0	15.8	636.0	638.1	316.2	6.7	1.000146
20500.0	481.8	-6.3	-28.2	15.6	626.7	636.5	314.6	7.2	1.000143
21000.0	472.5	-7.6	-29.4	15.4	617.5	635.0	317.7	8.4	1.000141
21500.0	463.4	-8.8	-30.5	15.2	608.5	633.5	321.5	9.9	1.000139
22000.0	454.4	-10.0	-31.7	15.0	601.5	632.0	331.4	12.5	1.000136
22500.0	445.5	-10.6	-31.9	15.3	590.9	631.4	337.5	15.3	1.000134
23000.0	436.8	-11.1	-32.1	15.6	580.5	630.8	336.6	17.4	1.000132
23500.0	428.3	-11.6	-32.4	15.9	570.3	630.1	335.1	19.2	1.000129

XX WIND DATA INVALID DUE TO MISSING RAW AZIMUTH AND ELEVATION ANGLES.

STATION ALTITUDE 4051.37 FEET MSL
24 SEP. 82 1200 MDT
ASCENSION NO. 97

UPPER AIR DATA
2[illegible]097
LC-37
TABLE 7 Cont'd

GLODETIC COORDINATES
32.40175 LAT DEG
106.31232 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
24000.0	419.8	-12.7	-32.9	16.5	561.3	620.8	331.8	20.4	1.000127
24500.0	411.5	-14.0	-33.6	17.1	553.0	627.3			1.000125
25000.0	403.4	-15.3	-34.3	17.7	544.7	625.7			1.000123

STATION ALTITUDE 4051.37 FEET MSL
24 SEP. 82 1200 HRS MDT
ASCENSION NO. 97

MANDATORY LEVELS
2370170097
LC-37
TABLE 8

GEODETIC COORDINATES
32.40175 LAT DEG
106.31232 LON DEG

PRESSURE MILLIBARS	GEOPOTENTIAL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS
850.0	5090.	24.2	6.5	32.	9999.0	9999.0XX
800.0	6819.	21.1	5.3	36.	9999.0	9999.0XX
750.0	8640.	17.7	3.3	38.	304.6	7.8
700.0	10561.	13.1	-3.2	32.	315.5	3.4
650.0	12585.	7.8	-4.7	41.	122.8	2.6
600.0	14729.	3.1	-13.3	29.	354.8	4.6
550.0	17032.	.5	-21.4	17.	345.6	9.4
500.0	19521.	-3.9	-26.0	16.	317.7	6.5
450.0	22215.	-10.3	-31.6	15.	335.0	13.8
400.0	25166.	-15.7	-34.6	18.		

XX WIND DATA INVALID DUE TO MISSING RAW AZIMUTH AND ELEVATION ANGLES.

STATION ALTITUDE 3989.00 FEET MSL
24 SEP. 82 1300 HRS MDT
ASCENSION NO. 485

SIGNIFICANT LEVEL DATA
20790[illegible]
WHITE SANDS
TABLE 9

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT
883.6	3989.0	29.5	12.9	36.0
868.2	4501.2	26.3	10.5	37.0
850.0	5112.5	24.1	10.0	41.0
827.6	5877.9	22.3	8.1	40.0
807.8	6569.3	22.3	5.3	33.0
769.0	7960.9	19.1	5.2	40.0
731.2	9382.9	16.0	3.8	44.0
700.0	10593.5	12.6	-1.0	39.0
676.5	11531.7	10.4	-4.8	34.0
630.8	13425.9	4.6	-5.2	49.0
624.9	13677.5	4.2	-7.9	41.0
599.9	14768.8	3.9	-16.2	18.0
559.9	16600.2	.6	-20.9	18.0
528.9	18097.2	-1.5	-24.0	16.0
500.0	19568.2	-4.5	-26.5	16.0
456.9	21870.3	-10.0	-31.0	16.0
423.5	23784.5	-13.1	-33.5	16.0
400.0	25206.0	-16.6	-35.3	18.0

STATION ALTITUDE 3989.00 FEET MSL
24 SEP. 82 1300 HRS MDT
ASCENSION NO. 485

UPPER AIR DATA
29700-20485
WHITE SANDS
TABLE 10

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
3989.0	883.6	29.5	12.9	36.0	1010.6	679.9	15.0	14.0	1.000287
4000.0	883.3	29.4	12.8	36.0	1010.5	679.8	15.0	13.9	1.000287
4500.0	868.2	26.3	10.5	37.0	1004.5	676.0	15.6	11.8	1.000277
5000.0	853.3	24.5	10.1	40.3	993.2	674.0	16.4	9.6	1.000274
5500.0	838.6	23.2	9.0	40.5	980.7	672.4	17.7	7.4	1.000268
6000.0	824.1	22.3	7.6	38.8	967.0	671.2	20.2	5.2	1.000261
6500.0	809.8	22.3	5.6	33.7	950.7	671.1	16.6	4.1	1.000251
7000.0	795.6	21.3	5.3	35.2	937.3	669.9	.7	3.3	1.000248
7500.0	781.7	20.2	5.3	37.7	924.5	668.7	316.9	4.7	1.000245
8000.0	768.1	19.0	5.2	40.1	911.8	667.4	303.2	7.1	1.000242
8500.0	754.5	17.9	4.7	41.5	899.2	666.1	298.6	9.4	1.000239
9000.0	741.2	16.8	4.2	42.9	886.7	664.8	294.5	9.4	1.000235
9500.0	728.1	15.7	3.3	43.5	874.7	663.4	290.2	8.2	1.000230
10000.0	715.1	14.3	1.4	41.5	863.7	661.8	285.7	6.4	1.000223
10500.0	702.4	12.9	-.6	39.4	852.8	659.9	281.8	4.1	1.000217
11000.0	689.7	11.6	-2.6	36.8	841.3	658.4	267.0	2.7	1.000211
11500.0	677.3	10.5	-4.6	34.2	829.9	656.9	230.8	2.1	1.000205
12000.0	664.9	9.0	-4.7	37.7	819.0	655.2	212.2	2.2	1.000203
12500.0	652.7	7.4	-4.7	41.7	808.4	653.4	195.6	2.5	1.000201
13000.0	640.8	5.9	-4.9	45.6	798.0	651.6	185.6	2.6	1.000198
13500.0	629.1	4.5	-5.9	46.6	787.5	649.9	205.4	1.4	1.000195
14000.0	617.4	4.1	-10.2	34.2	774.4	649.3	298.8	1.3	1.000186
14500.0	606.0	4.0	-14.9	23.7	760.8	648.9	351.8	4.0	1.000179
15000.0	594.7	3.5	-18.6	18.0	748.2	648.2	359.6	6.7	1.000174
15500.0	583.6	2.6	-19.3	18.0	736.7	647.2	2.6	8.4	1.000171
16000.0	572.7	1.7	-20.0	18.0	725.3	646.1	359.0	9.1	1.000168
16500.0	562.0	.8	-20.8	18.0	714.2	645.0	352.1	9.3	1.000165
17000.0	551.4	.0	-21.7	17.5	702.7	644.1	346.9	9.4	1.000162
17500.0	541.1	-.7	-22.8	16.8	691.2	643.3	342.1	9.5	1.000159
18000.0	530.9	-1.4	-23.8	16.1	680.0	642.5	336.4	8.7	1.000156
18500.0	520.8	-2.3	-24.7	16.0	669.5	641.3	329.4	7.9	1.000153
19000.0	510.9	-3.4	-25.5	16.0	659.3	640.1	321.9	7.3	1.000151
19500.0	501.2	-4.4	-26.3	16.0	649.2	638.9	313.7	6.9	1.000148
20000.0	491.5	-5.5	-27.3	16.0	639.5	637.5	313.7	7.4	1.000146
20500.0	482.0	-6.7	-28.3	16.0	630.0	636.0	315.5	8.1	1.000143
21000.0	472.7	-7.9	-29.3	16.0	620.6	634.6	323.8	10.0	1.000141
21500.0	463.6	-9.1	-30.2	16.0	611.4	633.2	330.1	12.2	1.000139
22000.0	454.6	-10.2	-31.1	16.0	602.0	631.6	340.1	15.4	1.000137
22500.0	445.6	-11.0	-31.8	16.0	592.0	630.0	346.5	19.0	1.000134
23000.0	436.9	-11.8	-32.5	16.0	582.2	628.4	348.5	20.9	1.000132

STATION ALTITUDE 3989.00 FEET MSL
24 SEP. 82 1300 HRS MDT
ASCENSION NO. 485

UPPER AIR DATA
26700204B5
WHITE SANDS
TABLE 10 Cont'd

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	RELATIVE HUMIDITY PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
23500.0	426.3	-12.6	-33.1	16.0	572.6	628.9	350.1	22.8	1.000130
24000.0	419.9	-13.6	-33.8	16.3	563.4	627.7			1.000127
24500.0	411.5	-14.9	-34.4	17.0	554.8	626.2			1.000125
25000.0	403.3	-16.1	-35.0	17.7	546.4	624.7			1.000123

STATION ALTITUDE 3984.0 FEET MSL
29 SEP. 82 1300 HRS MDT
ASCENSION NO. 485

MANDATORY LEVELS
26700.0485
WHITE SANDS
TABLE 11

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

PRESSURE MILLIBARS	GEOPOTENTIAL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS
850.0	5109.	24.1	10.0	41.	16.7	9.1
800.0	6840.	21.7	5.3	34.	12.7	3.4
750.0	8664.	17.6	4.5	42.	297.2	9.4
700.0	10583.	12.6	-1.0	39.	280.6	5.7
650.0	12605.	7.1	-4.8	43.	193.3	2.5
600.0	14747.	3.9	-18.2	18.	357.3	5.7
550.0	17048.	-.1	-21.9	17.	346.3	9.4
500.0	19532.	-4.5	-26.5	16.	312.8	6.9
450.0	22221.	-10.6	-31.5	16.	343.6	17.1
400.0	25163.	-16.6	-45.3	18.		

STATION ALTITUDE 4051.37 FEET MSL
24 SEP. 82 1400 HRS MDT
ASCENSION NO. 08

SIGNIFICANT LEVEL DATA
26701800[illegible]
LC-37
TABLE 12

GEODETIC COORDINATES
32.40175 LAT DEG
106.51232 LON DEG

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT DEGREES CENTIGRADE	REL.HUM. PERCENT
880.3	4051.4	29.5	12.4	35.0
868.0	4161.4	26.8	8.7	32.0
850.0	5068.1	25.8	8.8	34.0
826.6	5972.3	23.8	9.0	39.0
806.3	6585.3	23.1	6.8	35.0
766.8	8015.5	19.6	7.4	45.0
710.1	10168.4	-14.2	-1.0	55.0
700.0	10565.3	13.5	-1.3	36.0
642.8	12894.2	6.3	-5.3	43.0
629.8	13443.7	4.8	-5.0	49.0
613.1	14162.0	3.1	-13.6	28.0
588.1	15270.6	3.1	-18.2	19.0
533.2	17858.9	-1.3	-23.2	17.0
517.9	18620.1	-2.5	-24.1	17.0
510.4	18999.9	-3.5	-25.6	16.0
500.0	19534.2	-4.2	-26.2	16.0
453.4	22040.0	-10.6	-30.8	17.0
426.3	23593.5	-12.8	-26.3	31.0
400.0	25181.4	-16.3	-29.1	32.0

UPPER AIR DATA

STATION ALTITUDE 4051.37 FEET MSL
24 SEP. 82 1400 HRS MDT
ASCENSION NO. 98

2670180[illegible]
LC-37
TABLE 13

GEODETIC COORDINATES
32.40175 LAT DEG
106.31232 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
4051.4	880.3	29.5	12.4	35.0	1007.0	679.9	315.0	5.1	1.000284
4500.0	866.8	26.7	8.7	32.1	1002.0	676.3	321.0	4.8	1.000271
5000.0	852.0	25.9	8.8	33.[illegible]	987.5	675.4	328.5	4.7	1.000268
5500.0	837.4	24.7	8.9	36.7	974.2	674.1	336.0	4.6	1.000266
6000.0	822.9	23.7	8.6	38.3	960.6	672.9	343.9	4.6	1.000262
6500.0	808.7	23.2	7.1	35.5	946.2	672.2	351.7	4.6	1.000254
7000.0	794.6	22.1	7.1	37.[illegible]	933.1	671.0	348.1	4.8	1.000252
7500.0	780.8	20.9	7.3	41.4	920.6	669.7	327.5	5.6	1.000250
8000.0	767.2	19.6	7.4	44.[illegible]	906.2	668.5	313.0	6.9	1.000248
8500.0	753.7	18.4	5.5	42.7	896.5	666.7	306.0	7.6	1.000240
9000.0	740.3	17.1	3.6	40.4	884.9	665.1	307.0	7.5	1.000233
9500.0	727.2	15.9	1.6	38.1	873.4	663.5	306.0	7.5	1.000226
10000.0	714.4	14.6	-.3	35.8	862.1	661.9	303.1	6.5	1.000219
10500.0	701.7	13.6	-1.2	35.[illegible]	849.8	660.7	297.2	5.1	1.000215
11000.0	689.0	12.2	-2.0	37.[illegible]	838.8	659.0	287.1	3.8	1.000212
11500.0	676.5	10.6	-2.8	38.8	826.2	657.2	263.2	3.1	1.000208
12000.0	664.2	9.1	-3.7	40.3	817.7	655.3	253.9	3.3	1.000204
12500.0	652.1	7.5	-4.6	41.8	807.4	653.5	221.5	3.4	1.000201
13000.0	640.3	6.0	-5.3	44.2	797.1	651.7	240.2	2.2	1.000198
13500.0	628.5	4.7	-5.6	47.4	786.2	650.1	309.0	2.4	1.000195
14000.0	616.8	3.5	-11.3	32.7	775.6	648.5	337.6	5.2	1.000185
14500.0	605.4	3.1	-14.9	25.[illegible]	762.5	647.9	344.3	7.8	1.000179
15000.0	594.1	3.1	-17.0	21.2	748.4	647.8	344.2	8.7	1.000175
15500.0	583.0	2.7	-18.7	18.8	735.6	647.3	344.2	9.6	1.000171
16000.0	572.1	1.9	-19.6	18.4	724.1	646.3	344.2	10.6	1.000168
16500.0	561.4	1.0	-20.6	18.1	712.7	645.3	344.2	11.5	1.000165
17000.0	550.8	.2	-21.5	17.7	701.6	644.3	340.8	11.4	1.000162
17500.0	540.5	-.7	-22.5	17.3	690.6	643.3	335.3	10.8	1.000159
18000.0	530.3	-1.5	-23.3	17.0	679.7	642.3	329.2	10.3	1.000156
18500.0	520.3	-2.3	-24.0	17.0	668.8	641.3	323.4	9.8	1.000153
19000.0	510.4	-3.5	-25.6	16.0	659.0	639.9	317.1	9.4	1.000151
19500.0	500.7	-4.2	-26.2	16.0	648.0	639.1	310.4	9.1	1.000148
20000.0	491.0	-5.4	-27.1	16.2	638.5	637.6	309.3	9.3	1.000146
20500.0	481.5	-6.7	-28.0	16.4	629.1	636.1	310.1	9.7	1.000143
21000.0	472.2	-7.9	-28.9	16.6	620.0	634.6	311.2	10.0	1.000141
21500.0	463.1	-9.2	-29.8	16.[illegible]	611.0	633.0	319.5	12.0	1.000139
22000.0	454.1	-10.5	-30.8	17.0	602.1	631.5	325.3	14.1	1.000137
22500.0	445.2	-11.3	-29.1	21.1	591.9	630.6			1.000135
23000.0	436.5	-12.0	-27.6	25.7	581.8	629.6			1.000133
23500.0	427.9	-12.7	-26.5	30.2	571.9	629.0			1.000131

STATION ALTITUDE 4051.37 FEET MSL
24 SEP. 82 1400 HRS MDT
ASCENSION NO. 98

UPPER AIR DATA
2670160096
LC-37
TABLE 13 Cont'd

GEODETIC COORDINATES
32.40175 LAT DEG
106.51232 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
24000.0	419.4	-13.7	-27.0	31.3	562.8	627.7			1.000129
24500.0	411.1	-14.8	-27.9	31.6	554.0	626.4			1.000127
25000.0	402.9	-15.9	-28.8	31.9	545.3	625.0			1.000125

STATION ALTITUDE 4051.37 FEET MSL
24 SEP. 82 1400 HRS MDT
ASCENSION NO. 98

MANDATORY LEVELS
26791A0096
LC-37

TABLE 14

GEODETIC COORDINATES
32.40175 LAT DEG
106.31232 LON DEG

PRESSURE	GEOPOTENTIAL	TEMPERATURE		REL.HUM.	WIND DATA	
		AIR	DEWPOINT		DIRECTION	SPEED
MILLIBARS	FEET	DEGREES CENTIGRADE		PERCENT	DEGREES(TN)	KNOTS
850.0	5064.	25.8	8.8	34.	329.3	4.6
800.0	6804.	22.6	7.0	37.	356.3	4.7
750.0	8633.	18.0	5.0	42.	307.6	7.5
700.0	10555.	13.5	-1.3	36.	296.3	5.0
650.0	12579.	7.2	-4.6	42.	223.7	3.2
600.0	14719.	3.1	-15.8	25.	344.3	8.2
550.0	17022.	.1	-21.8	18.	340.5	11.3
500.0	19506.	-4.2	-26.2	18.	310.1	9.1
450.0	22196.	-10.9	-30.1	19.	327.4	15.1
400.0	25139.	-16.3	-29.1	32.		

STATION ALTITUDE 3989.0 FEET MSL
24 SEP. 82 1505 HRS MDT
ASCENSION NO. 486

SIGNIFICANT LEVEL DATA
267002486
WHITE SANDS
TABLE 15

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT
882.5	3989.0	32.5	8.7	23.0
876.0	4206.3	29.8	5.1	21.0
850.0	5081.9	25.8	4.9	26.0
815.2	6283.0	23.0	4.0	29.0
766.2	8046.4	19.9	1.8	30.0
700.0	10572.3	13.2	-8.0	22.0
630.9	13403.1	5.6	-15.0	21.0
622.5	13762.7	4.8	-15.1	22.0
549.9	17052.8	-.5	-23.9	15.0
527.1	18160.9	-2.7	-26.4	14.0
512.2	18907.7	-3.1	-26.8	14.0
500.0	19533.2	-4.7	-28.1	14.0
462.4	21540.4	-8.8	-31.4	14.0
449.0	22288.2	-9.8	-32.2	14.0
400.0	25181.6	-17.0	-36.6	16.0

STATION ALTITUDE 3989.00 FEET MSL
24 SEP. 82 1505 HRS MDT
ASCENSION NO. 486

UPPER AIR DATA
26700.0000
WHITE SANDS
TABLE 1C

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
3989.0	882.5	32.5	8.7	23.0	1001.0	682.7	30.0	9.9	1.000269
4000.0	882.2	32.4	8.5	22.9	1001.1	682.6	29.9	9.9	1.000268
4500.0	867.2	28.5	5.1	22.7	997.8	677.9	26.9	9.8	1.000259
5000.0	852.4	26.2	4.9	25.5	980.2	675.3	23.0	9.8	1.000257
5500.0	837.7	24.8	4.6	27.0	975.6	673.8	20.7	9.7	1.000254
6000.0	823.3	23.7	4.2	28.3	962.6	672.5	17.6	9.7	1.000250
6500.0	809.0	22.6	3.8	29.1	949.3	671.2	9.3	8.1	1.000246
7000.0	794.9	21.7	3.1	29.4	935.6	670.2	355.3	6.5	1.000242
7500.0	781.1	20.9	2.5	29.7	922.2	669.2	355.5	6.3	1.000238
8000.0	767.5	20.0	1.9	30.0	908.9	668.2	317.4	7.0	1.000233
8500.0	753.9	18.7	.1	28.6	897.1	666.6	308.8	7.3	1.000227
9000.0	740.5	17.4	-1.8	27.0	885.5	664.9	301.6	7.4	1.000221
9500.0	727.4	16.0	-3.7	25.4	874.1	663.3	301.1	7.4	1.000216
10000.0	714.5	14.7	-5.7	23.8	862.8	661.7	302.2	7.3	1.000210
10500.0	701.8	13.4	-7.7	22.2	851.7	660.1	300.5	6.5	1.000206
11000.0	689.1	12.1	-9.1	21.8	840.3	658.5	296.7	5.5	1.000202
11500.0	676.6	10.7	-10.3	21.7	829.0	656.9	296.5	4.6	1.000198
12000.0	664.3	9.4	-11.5	21.5	817.9	655.3	297.6	3.6	1.000194
12500.0	652.2	8.0	-12.8	21.3	806.9	653.7	294.7	4.6	1.000191
13000.0	640.3	6.7	-14.0	21.1	796.2	652.1	292.7	5.7	1.000187
13500.0	628.6	5.4	-15.0	21.3	785.3	650.6	290.7	6.9	1.000184
14000.0	617.0	4.4	-15.7	21.5	773.5	649.4	299.9	8.1	1.000181
14500.0	605.4	3.6	-17.0	20.4	761.3	648.4	319.3	8.5	1.000178
15000.0	594.1	2.8	-18.3	19.4	749.3	647.5	334.5	9.6	1.000174
15500.0	583.0	2.0	-19.6	18.5	737.6	646.5	340.6	10.6	1.000171
16000.0	572.2	1.2	-20.9	17.2	726.0	645.5	343.8	11.3	1.000168
16500.0	561.5	.4	-22.3	16.2	714.6	644.5	341.6	11.0	1.000164
17000.0	551.0	-.4	-23.7	15.1	703.4	643.6	338.4	10.8	1.000161
17500.0	540.6	-1.4	-24.9	14.6	692.6	642.4	333.7	10.7	1.000158
18000.0	530.4	-2.4	-26.1	14.1	682.0	641.2	324.9	10.2	1.000156
18500.0	520.3	-2.9	-26.6	14.0	672.3	640.6	311.2	9.9	1.000153
19000.0	510.4	-3.3	-26.9	14.0	662.8	640.1	300.5	9.8	1.000150
19500.0	500.6	-4.6	-28.0	14.0	649.2	638.5	291.1	10.0	1.000148
20000.0	491.0	-5.7	-29.8	14.0	639.2	637.3	296.8	10.7	1.000145
20500.0	481.5	-6.7	-29.7	14.0	629.2	636.1	303.4	11.5	1.000143
21000.0	472.2	-7.7	-30.5	14.0	619.5	634.9	317.8	12.7	1.000141
21500.0	463.1	-8.7	-31.3	14.0	609.9	633.6	329.9	14.7	1.000138
22000.0	454.1	-9.4	-31.9	14.0	599.6	632.8	337.6	16.8	1.000136
22500.0	445.2	-10.3	-32.5	14.1	589.9	631.7	342.1	19.0	1.000134
23000.0	436.4	-11.6	-33.3	14.5	581.0	630.2			1.000131

STATION ALTITUDE 3989.00 FEET MSL
24 SEP. 82 1505 HRS MDT
ASCENSION NO. 486

UPPER AIR DATA
26200204B6
WHITE SANDS
TABLE 1C Cont'd

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION (DEGREES(TN))	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
23500.0	427.8	-12.8	-34.1	14.8	572.3	628.7			1.000129
24000.0	419.3	-14.1	-34.8	15.2	563.7	627.2			1.000127
24500.0	411.0	-15.3	-35.6	15.5	555.2	625.7			1.000125
25000.0	402.9	-16.5	-36.5	15.9	546.9	624.1			1.000123

STATION ALTITUDE 3989.00 FEET MSL
24 SEP. 82 1505 HRS MDT
ASCENSION NO. 486

MANDATORY LEVELS
26700.048U
WHITE SANDS
TABLE 17

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

PRESSURE MILLIBARS	GEOPOTENTIAL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS
850.0	5078.	25.8	4.9	26.	23.3	9.8
800.0	6815.	22.1	3.4	29.	1.1	7.1
750.0	8641.	18.3	-.4	28.	306.7	7.3
700.0	10562.	13.2	-8.0	22.	300.1	6.4
650.0	12585.	7.8	-13.0	21.	294.2	4.8
600.0	14728.	3.2	-17.6	20.	327.7	9.0
550.0	17026.	-.5	-23.9	15.	338.0	10.8
500.0	19505.	-4.7	-28.1	14.	290.7	10.0
450.0	22197.	-9.7	-32.1	14.	339.4	17.8
400.0	25139.	-17.0	-36.8	16.		


DAT
ILM